

## SOFT STRAP HELMET STABILIZER

### Technical Field

The present invention relates to all full-face helmets of the type that are used in motocross, off-road racing, BMX, snowcross, auto racing, boat racers and jet skiers, on land and water. More particularly, the invention relates to a stabilizer system that supplements a conventional helmet chin strap.

### Background of the Invention

Full-face helmets are, of course, well-known in the art. These helmets typically have a single, integrated shell that is padded, with a forward portion that covers the wearer's mouth and chin area. An elliptically-shaped opening curves around the front so that the wearer can see. The helmet is held on the wearer's head by a chin strap that extends underneath the wearer's jaw near his or her throat. Chin straps typically consist of two strips of material, one each being connected to opposite sides of the helmet. The two pieces are joined together by a double-ring buckle. Typically, the chin strap is in the neighborhood of about one-inch in width.

Full-face helmets are worn for a variety of reasons relating to both safety and speed. They also help keep out the cold. When used for off-road or motocross racing they help keep debris off the face and chin.

Conventional helmet chin straps create a pivot-point that allows a helmet to ride up and down on the wearer's head. For example, even if the helmet fits correctly, conventional chin straps will allow the front part of a full-face helmet to move up and down approximately four inches relative to the wearer's face. This is a problem and has been for years. It becomes particularly problematical for off-road racing, motocross, ATV, snowmobiles, BMX, jet skiers, boat racers, and ECT uses, where the rider or driver of the vehicle is subject to a variety of forces

that can move the helmet relative to the head. These uses can create a potentially dangerous situation when a full-face helmet “rides” far enough up the face while the vehicle is moving, such that the portion that covers the mouth begins to block the wearer’s view.

The present invention solves the above problem by providing a stabilizer system that impedes the ability of the helmet to ride upwardly in the manner just described.

### **Summary of the Invention**

The invention is a stabilizer system for use in connection with all full-face helmets. The invention includes a separate snap fitting that is mounted or positioned at three locations on the helmet. One snap fitting is mounted forwardly, near the helmet’s lower edge, in or near the chin region. Another pair of snap fittings are mounted near the helmet’s edge, on opposite sides of the helmet, near the jaw region of the helmet.

The invention includes a chin stabilizer made of a durable, flexible material. The chin stabilizer has a generally triangular configuration, with a forward vertex that is connected to the snap fitting on the chin of the helmet and lateral portions that are connected, one each, to the second and third snap fittings on opposite sides. A central portion of the chin stabilizer rests underneath the wearer’s chin when the stabilizer is connected.

In use, the helmet is placed over the wearer’s head, the chin strap is buckled, and the chin stabilizer is then snapped into place. Preferably, the snap fittings on the side are positioned sufficiently aft, relative to the jaw, so that the chin stabilizer fits snugly against the underside of the chin. This resists any upward force that is asserted against the front of the helmet.

The chin stabilizer is preferably made of vinyl or other materials having similar durability. It may be padded on one side for comfort. Moreover, the portion of the stabilizer that

is adjacent the throat has a concave curve so that it generally follows the shape of the wearer's neck.

The invention as described above will become better understood upon review of the following description, which is to be taken in conjunction with the drawings.

### **Brief Description of the Drawings**

In the drawings, like reference numerals and letters refer to like parts throughout the various views, and wherein:

Fig. 1 is a pictorial view of the bottom of a full-face helmet with a chin stabilizer constructed in accordance with the invention, the chin stabilizer being exploded below the helmet, and a partial section of the chin stabilizer being cut away to reveal a snap fitting in the chin region of the helmet;

Fig. 2 is a top view of the chin stabilizer shown in Fig. 1;

Fig. 3 is a side view of a snap fitting on the stabilizer shown in Fig. 2;

Fig. 4 is a view like Fig. 3, but shows a backing material peeled away from the stabilizer; and

Fig. 5 is a view like Fig. 1, but shows the chin stabilizer mounted to the helmet.

### **Best Mode for Carrying Out the Invention**

Referring now to the drawings, and first to Fig. 1, shown generally at 10 is a chin stabilizer constructed in accordance with a preferred embodiment of the invention. The chin stabilizer 10 has a generally triangular configuration and is connected to the bottom of a full-face motorcycle helmet 12, in the manner shown in Fig. 5.

Referring now to Fig. 2, the chin stabilizer 10 is made of a flexible but durable material. In preferred form, it is multi-layered and has a vinyl, or vinyl-equivalent, layer 14 on the outside,

a cloth layer 16 on the inside, and a layer of thin foam padding 18 sandwiched between the outer and inner layers (see Fig. 4). The outer and inner layers 14, 16 are sewn together to create the peripheral band shown at 20 in Fig. 2.

The chin stabilizer 10 has three “female” snap fittings 22, 24, 26. Each one of the snap fittings 22, 24, 26 is attached to the chin stabilizer 10 via conventional means. The central portion 28 of the chin stabilizer 10, which is padded, rests underneath a wearer’s chin when the stabilizer is connected to the helmet 12. Referring to Fig. 1, the helmet has three corresponding “male” snap fittings 30, 32, 34. In use, the snap fitting 22 on the vertex of the stabilizer is connected to the snap fitting 30 on the helmet. Snap fitting 30 is on the forward, chin region of the helmet near the lower edge of the helmet. Similarly, female snap fittings 24, 26 are connected to male fittings 32, 34, which are on opposite sides of the helmet, near the jaw region of the wearer. The second and third male snap fittings 32, 34 are positioned sufficiently aft of the chin, and upward from the lower edge of the helmet, such that the chin stabilizer 10 is pulled snugly against the helmet. The chin stabilizer 10 has a concave curve 36 that follows the shape of the wearer’s neck.

The stabilizer system described above is easy to adapt to any conventional full-face helmet in use today. It is very easy to place male snap fittings on a helmet with a simple kit. The snap fittings 22, 24, 26 on the chin stabilizer 10 are of conventional size and shape. In use, the wearer places the helmet on his or her head, buckles the chin strap (not shown in the drawings), and attaches the chin stabilizer in the manner shown in Fig. 5. The generally triangular shape of the chin stabilizer creates air vents 38, 40 for the wearer (see Fig. 5). It also constrains the forward face of the helmet from being pushed upwardly over the wearer’s chin and nose.

It is to be appreciated that the chin stabilizer 10 and related snap-fittings system could be modified in many different ways without departing from what is considered to be the invention. It is obvious that many different kinds of materials could be used to make the chin stabilizer. There may be many different ways of making a "cushioned" or "padded" stabilizer. For example, neoprene rubber may be suitable for use in making the stabilizer 10 for water sports. While it is believed that snap fittings are the best way to mount the stabilizer 10 to a helmet 12, it is conceivable that other ways may be devised that perform the same function, in substantially the same way, to produce substantially the same result. While the chin stabilizer was designed for full-face helmets, it is possible that it could be used on other kinds of helmets, like football or baseball helmets. Therefore, what is considered to be the invention is not to be limited by the foregoing description. Instead, the invention is to be limited only by the patent claim or claims which follow, the interpretation of which is to be made in accordance with the established doctrines of patent claim interpretation.